

City and Borough of

YAKUTAT

PROPOSAL
Engineering/Architectural
Consultant Services

Final Design and
Construction Documents
for a Multipurpose Sheet
Pile and Marine Fill Dock

October 31, 2005

Contact: Alan Christopherson, P.E., achristopherson@pnd-anc.com
or Dempsey Thieman, P.E., dthieman@pnd-anc.com
Phone 907.561.1011 - Fax 907.563.4220

P | N | D
Engineers



Incorporated

CONSULTING
ENGINEERS

October 27, 2005

PND 05A-137

Mr. Frank Ryman, Borough Planner
City and Borough of Yakutat
P.O. Box 160
309 Max Italio Drive
Yakutat, Alaska 99689

Subject: Proposal to Provide Final Design and Construction Documents for a Multipurpose
Sheet Pile and Marine Fill Dock

Dear Mr. Ryman:

PND Engineers is pleased to submit this proposal in response to the above-named RFP. PND is thoroughly familiar with the project at hand, and is ready to begin work immediately to meet both time and budget requirements. PND is also prepared to ensure all elements of design and the construction process meet the regulations and standards of the Economic Development Administration (EDA), and the intent of the EDA grant award. We have successfully completed many similar projects with EDA in the past and are currently working with EDA on others.

During the design phase, PND will conduct an initial site visit and bi-weekly design meetings; design an open cell dock, barge dolphin, fuel float, seafood processing station, bulk fuel piping system, access road to the project site and passenger loading ramp; provide specifications for a marine crane and gravel conveyor; coordinate with the EDA and subconsultant RSA Engineering, Inc.; and provide bidding and construction documents, and bid support. RSA will participate in the site visit, and provide schematic electrical design, design development, and construction documents.

During the construction phase, PND will conduct a kickoff meeting and weekly progress meetings; provide construction support, as-built drawings and project close-out documentation. RSA will provide both in-office construction administration and construction site inspection.

This submittal shall remain firm for 60 calendar days.

The PND team appreciates the opportunity to propose on this project, and looks forward to applying many years of experience and expertise toward providing a cost-effective dock facility. Please feel free to call at any time if you have questions or need more information.

Sincerely,

PND Incorporated | Anchorage Office

Alan B. Christopherson, P.E.
Principal Engineer | Treasurer

PROPOSAL
Development of Final Design and Construction Documents
Multipurpose Sheet Pile and Fill Marine Dock
City and Borough of Yakutat

Offeror	PND Engineers, Inc.	
Contact	Alan Christopherson, P.E., Principal-in-Charge or Dempsey Thieman, P.E., Project Manager	Phone 907.561.1011 Fax 907.563.4220
Address	1506 W. 36 th Ave. Anchorage, AK 99503	www.pndengineers.com
Licensing	Alaska Business License 26498	

This proposal responds to the City and Borough of Yakutat ("the Borough") RFP named above, dated Sept. 21, 2005. PND Engineers and RSA Engineers have teamed to provide the services detailed in this submission, and have reviewed all RFP materials including conceptual design drawings, preliminary job specifications, soil logs, bathymetry survey information and the dive survey report and video. The following sections discuss required qualifications as listed on Page 5 of the RFP, within four scored sections as delineated on Page 6. We look forward to the Borough's favorable consideration of this proposal.

Part One**30 Points**

Scope of Work

The project consists of several major components: demolition of existing condemned timber fuel dock and two timber dolphins, installation of a temporary bulk fuel delivery system, as well as construction of sheet pile fill dock and other related items and equipment.

In addition to the sheet pile fill dock, the project consists of a number of other additional components; access road to the facility, float dock for future fuel sales to marine vessels, extension of the existing bulk fuel delivery system, electrical power and facility lighting, gravel conveyor system, passenger loading ramp for cruise vessels, two marine cranes, refrigeration van electrical plug-ins, and heavy duty dolphin for large barge mooring.

PND has been working in conjunction with the City and Borough of Yakutat (the Borough) for several years in the development of the project as well as performing and/or directing the site survey, geotechnical investigation program, dive inspection, project permitting, and preliminary design. Our familiarity with the project development history provides our team with an excellent base of knowledge for the development of detailed and final design, bidding and construction documents, engineering cost estimates, bid process assistance, construction management and as-built drawings for the project. Major components of this project will be:

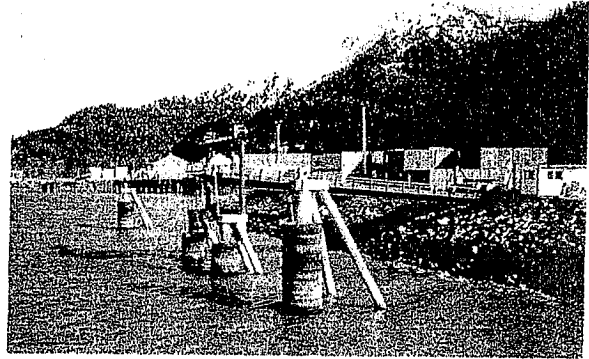
Sheet Pile Fill Dock – We propose to utilize an Open Cell sheetpile bulkhead to provide the high capacity, low cost dock structure which provides the required water depth, configuration and load capacity for the project. An Open Cell bulkhead provides unique advantages over other alternatives for this project including making use of abundant local building materials – sand and gravel. This PND technology presents a unique solution for waterfront structures providing the lowest cost and highest performance under both ideal and extreme conditions. The Open Cell bulkhead structure is a proven technology which has been used throughout Alaska and the U.S. The Open Cell structure



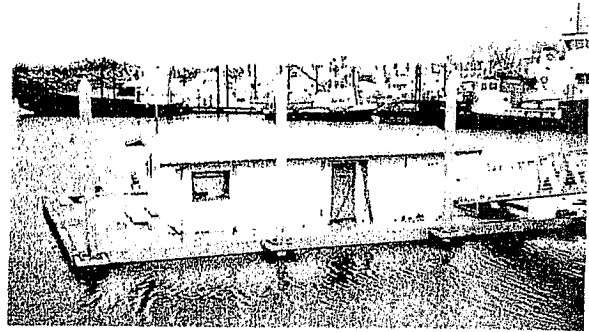
Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

provides the best solution for the high load capacity and high seismic acceleration in conjunction with moderate in-situ soil strength found at the site. PND developed this system for remote locations similar to Yakutat where high value and low cost dock facilities are needed. PND also has established long-term relationships with material suppliers to ensure accurate material pricing and on-time delivery.

Barge Dolphin – A high capacity, three-pile dolphin designed to allow large barges for fuel delivery and gravel transportation. PND has designed many of these robust but relatively inexpensive structures to resist very high vessel berthing loads. Used heavy equipment tires are proposed to provide low cost but effective fendering for the dolphin, a proven low-cost system which has been used successfully throughout Alaska. Dolphin configuration and lighting will meet USCG requirements. If an upgraded better fender system is desired in the future, the dolphin can be retrofitted.



Fuel Float – Develop and design a float to be used for future marine fuel sales. The fuel float would be designed in accordance with DEC requirements and regulations such as secondary containment of surface drainage to minimize efforts required for future fuel sales. The fuel float is intended to be accessed by ladder from the sheet pile fill dock and will not include a building or fuel delivery equipment as this will be provided by the future lease operator. Bulk fuel pumping equipment is not required as the fuel barges carry their own pumps. PND has developed many float systems over the years and has pioneered many innovations in floats and lightweight gangways.



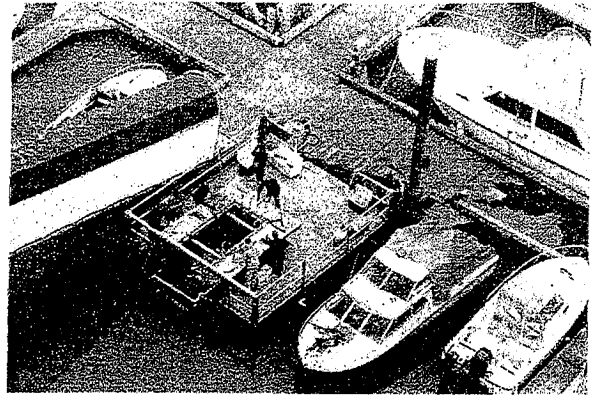
Marine Cranes – two marine hydraulic cranes (Slattery Inc. or similar) located at the face of the sheet pile dock used to load gear and unload seafood totes from fishing vessels and related equipment. Cranes are proposed to be 5-ton capacity – other sizes can be considered if desired. The open cell sheet pile dock can accommodate nearly any hydraulic crane without modification. PND does not design cranes but adapts docks to receive different sizes of cranes and can assist the Borough in specifying the appropriate crane.

Demolition of Existing Fuel Dock – The existing condemned timber fuel dock is to be demolished, removed from project site and disposed. Efforts by PND and the Borough have resulted in permitting agencies allowing the structure to be removed from shore without requiring the effort and expense of barge supported demolition. PND has investigated some preliminary methods with contractors.

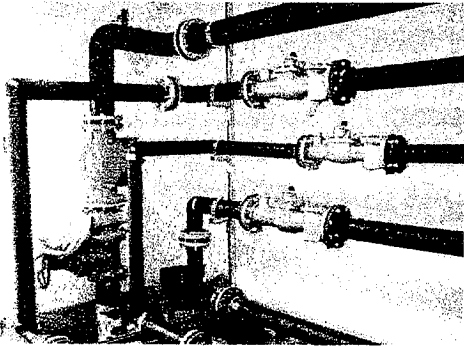
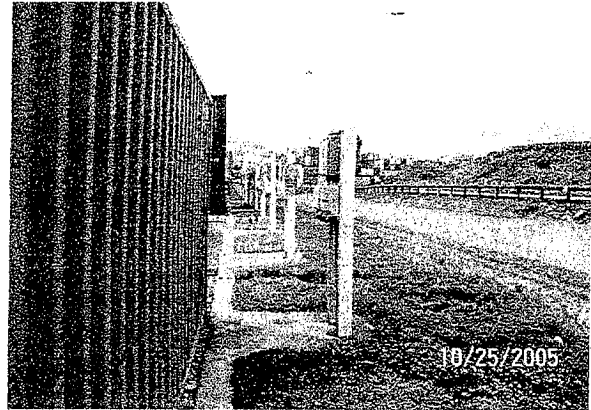
Seafood Processing Station – We understand that the seafood processing station is intended to provide a clean, insect free, covered environment for the weighing and grading of seafood by local fisherman. Our proposal includes the design of a post-and-beam type structure approximately 10 ft x 16 ft with metal roof and sides constructed of hanging plastic strips for flying insect control. The

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seafood processing structure will incorporate overhead lighting, ventilation, a stainless steel table with perimeter stations for fish handling, potable water rinse and space for sorting, weighing, and packaging, etc. If desired by the Borough, the fish-processing table could incorporate a fish waste sump and trough to transport the fish waste to removable, floating holding bins near the dock. When appropriate, the fish waste bin would be towed to an approved deep-water location to be emptied and returned. PND has designed similar seafood processing stations and floating fish waste bins in Valdez and Seldovia; both have received praise for their functionality.



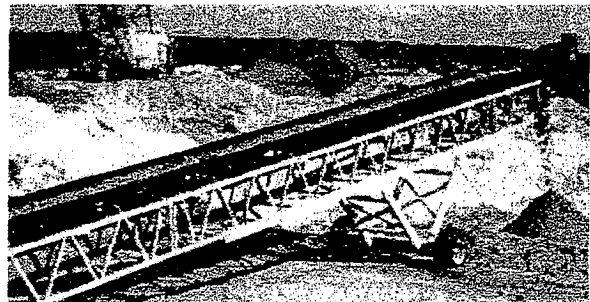
Refrigeration System – We understand that a piped glycol heat exchange system is not desired at this time. The refrigeration system is to consist of 480V electrical plug-ins to provide reliable power for operation of freezer vans for storage of processed seafood awaiting shipment. PND and RSA have extensive experience with these systems in locations such as APL's Dutch Harbor facility. PND will incorporate RSA's electrical design into the project.



Bulk Fuel Piping – The existing bulk fuel piping system is to be extended from the existing timber fuel dock to the Multi Purpose Dock. The fuel system is proposed to be extended similarly to the existing – above ground, galvanized steel piping, in accordance with all USCG and DEC regulations. Fast actuating, dual seal valves are proposed for low-maintenance and ease of use. PND has adapted many rural marine projects to receive fuel piping.

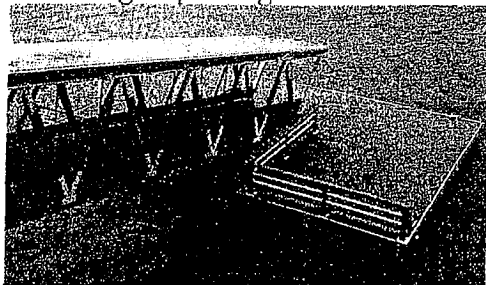
Access Road to Site – PND will locate and design a gravel access road to the project site, and develop access easements as required for construction through uplands. It is understood that the access road is intended to remain on uplands. Access along the tidelands may be required if current leaseholders are not amenable to the access road. Our proposal is based upon uplands access to the project, as permitting, design and property issues for tideland access are not well defined at this time. PND will work with the Borough and leaseholder(s) to develop a workable plan.

Gravel Conveyor – As we understand, a trailer mounted, mobile gravel conveyor is desired to allow efficient loading of gravel onto large material barges. The proposed system would provide a belt width of 48 inches and be mobile for relocation to other facilities such as the USFS LTF if needed.



Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

Passenger Loading Ramp – A cruise-ship passenger loading ramp is desired for the loading and unloading of passengers and crew from 150 passenger cruise vessels. PND has extensive experience with the design of gangways, catwalks and adjustable passenger loading ramps. Our proposal includes the design of a non-motorized mobile ramp. A durable canvass cover could be included if desired. PND has developed, adapted and invented many passenger loading ramps for cruise ship docks. PND has been responsible for many cruise ship facilities in Juneau, Skagway and Ketchikan.



Project Redesign – It is our understanding that the Borough has a limited amount of funds from EDA as well as some Borough matching funds. We are concerned that the project cost estimate does not reflect recent construction materials cost increases (steel, cement, plastic, etc) and additional project scope items – planned funding will likely be inadequate for the project as currently identified. We are prepared to design all items project scope items, however the Borough must decide which items are to be deleted from the project scope if necessary. Additional minor modifications such as scope item deletions can be made at the Final Design Plan review. Our recommendation would be to develop a simple base project that we are confident will fit into the budget and make all other items additive (or deductive) alternatives. This way the project can be tailored to the funds available.

Methodology

Working on a compressed schedule, this project's success will depend heavily on communication among the Borough, other leaseholder(s), EDA and PND. PND played a key role in the successful completion of the City of Dillingham All Tide Dock project (EDA Project 07-79-05381 and plans to use the same team and methodology to ensure successful and timely completion of the Yakutat Multipurpose Dock. Clear communication between all parties will be important to ensure the project is designed and constructed within the required timeframe. Our proposed methodology follows:

- **Initial Site Visit** – an initial coordination / project kick-off meeting and site visit will be conducted with the Borough to ensure a complete and comprehensive understanding of the project by all parties. We recommend this meeting be held with City Council members, EDA representatives, other stakeholders and involved community members as appropriate. Any additional information (such as as-built drawings, existing fuel piping, utilities, access road layout, etc.) required for project design will be gathered at that time. Information regarding project equipment (gravel conveyor, fish processing station, etc.) will also be collected. Any required coordination with EDA can also be completed during the site visit.
- **Detailed Design** – The information included in the preliminary design package as well as that gathered during the initial site visit will be used during the detailed design phase of the project. Details of all aspects of the project will be developed to approximately the level of 70% complete. By-weekly teleconference meetings with PND, the Borough and EDA will be held to ensure clear understanding of the project on all sides and to quickly answer questions as the design develops. This methodology effectively eliminates delays from miscommunication and ensures a more successful project. As necessary, PND will consult with construction contractors for constructability review of the project. When approximately 70% complete, a drawing package with engineer cost estimate will be submitted to the Borough and EDA for review and comment. These documents will be used by the Borough to determine which items of the project will be removed from the scope if project funding is inadequate to cover all items.

Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

- **Final Design, Bidding and Construction Documents** - Review comments from the 70% Plan review will be incorporated during final design. Final details of all aspects of the project will be fully developed. Construction specifications, contract documents and bidding documents will be developed concurrently with final design. PND has extensive experience with bidding and construction documents, many for EDA projects. Deductive bid items will be clearly ordered and identified in accordance with Borough and EDA requirements. Final Construction Drawings, Bidding and Contract Documents and Engineer Cost Estimate will be submitted to the Borough and EDA for final review and comment. Total project cost vs. project scope will again be reviewed to ensure the project can be constructed for the available funds.
- **Bid Phase Support** – PND will develop project advertisements in accordance with EDA requirements, and submit to the Borough for approval and placement. During the bid phase, PND will be fully prepared to receive questions from bidders and promptly issue addenda to all bidders if necessary. A pre-bid meeting at PND will familiarize bidders with the project requirements and expectations. If desired by the Borough, PND will receive and open bids in Anchorage as it has for previous EDA projects. All bid activities will be conducted in accordance with EDA requirements. PND will assist in evaluating the qualifications of prospective bidders, proposed wage rates and evaluation of bids.
- **Construction Management and Inspection** – PND proposes to provide a full-time on-site engineer to manage, observe and inspect construction to ensure the project is constructed in accordance with all requirements. PND routinely provides fabrication through on-site construction inspection and contract management services for projects. PND will review and approve/disapprove shop drawings, samples, submittals, RFIs, and product substitutions.

An on-site construction kick-off meeting will be held in Yakutat with the Borough, PND design engineer, PND on-site inspector, the construction contractor, and EDA personnel. Clear lines of communication and accurate documentation are critical to ensure the project is constructed with minimal delays and complications. Weekly construction meetings will be held to assess progress and address construction issues as they occur. PND will develop and provide all required communication forms such as RFI forms and Change Orders Request forms. PND is known for responding promptly to construction issues/concerns. In addition to on-site inspection, PND will review all contractor pay requests and recommend approval or disapproval based upon project completion to-date. PND takes pride in successful completion of projects constructed without claims or unintended change orders, such as the Dillingham All-Tide Dock.

Records will be kept neatly categorized, accurate and up to date, and allow access by the Borough and/or EDA at any time. All contract files will be delivered to the Borough's offices at the end of the project, categorized, labeled, and boxed. In the event of a project audit, PND will be available as needed.

- **As-Built Drawings and Project Close-out** – After the project construction has been completed and accepted by PND and the Borough, as-built AutoCAD drawings will be developed and delivered to the Borough along with one mylar hard copy.

Project Work Plan/Timetable

The following schedule is ambitious and ensures the best value for funds allocated. The project schedule identified in the RFP documents (project construction must begin by September 7, 2007

Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

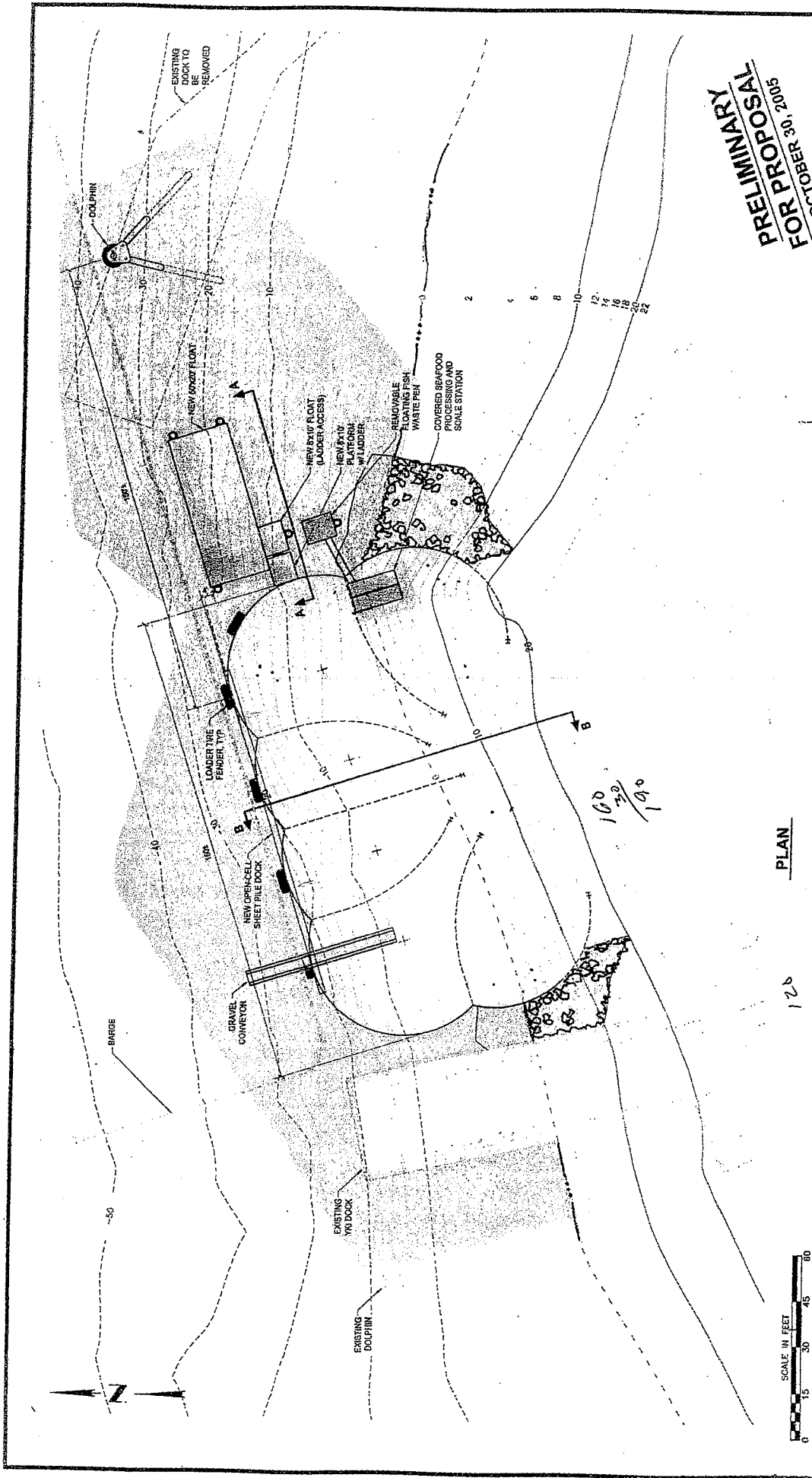
and must be completed by October 7, 2009) can easily be met. However, an accelerated project schedule may be beneficial to the Borough and EDA for several reasons:

- Bulk fueling receiving – ease USCG concerns
- Construction cost – minimize effects of cost project inflation
- Maximize use of the facility and benefits to the community
- Secure EDA funding to ensure it is not allocated to other emergency repair projects or disasters

Because the preliminary design has been completed and the required permit documents have been acquired, we believe the project schedule can be accelerated substantially if desired by the Borough and EDA. The aggressive project schedule below identifies how the project can be constructed by the end of 2006. We are prepared to meet this schedule. If a less aggressive schedule is desired, additional time can be added to the scheduled tasks as needed.

Note that the project US COE permit expires May 31, 2008. If the project is not completed by this date, a permit extension must be requested, which we will complete if necessary.

ID	Task Name	Start	Finish	Duration	2005	2006												2007
					Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1	Notice To Proceed	11/30/2005	11/30/2005	1d														
2	Initial Site Visit	12/1/2005	12/28/2005	4w														
3	Detailed Design	12/29/2005	2/8/2006	6w														
4	70% Review Plan Set Submittal	2/9/2006	2/9/2006	1d														
5	Borough / EDA Review of 70% Plan Set	2/10/2006	2/23/2006	2w														
6	Final Design	2/24/2006	3/30/2006	5w														
7	Final Construction Dwg's, Bid Documents	3/31/2006	3/31/2006	1d														
8	Borough/EDA Review of Final Documents	4/3/2006	4/14/2006	2w														
9	Final Review Changes and Reproduction	4/17/2006	4/28/2006	2w														
10	Bidding	5/1/2006	6/2/2006	5w														
11	Construction Bids Due	6/5/2006	6/5/2006	1d														
12	Bid Evaluation	6/6/2006	6/19/2006	2w														
13	Bid Award	6/20/2006	6/20/2006	1d														
14	Construction Phase	6/21/2006	12/19/2006	26w														
15	Project Close-out and As-built Drawings	12/20/2006	2/19/2007	8w 4d														



PRELIMINARY FOR PROPOSAL OCTOBER 2005

**CITY AND BOROUGH OF YAKUTAT
MULTI-PURPOSE DOCK**

PROPOSED SITE PLAN

P N D Incorporated
CONSULTING ENGINEERS
1308 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
Fax: 907.561.0201
www.pndinc.com

Project No. 05-0101 and Design Inc. (PDI) is not responsible for any errors, omissions, or inaccuracies in this plan. The user of this plan assumes all liability for any errors, omissions, or inaccuracies. The user of this plan is advised that this plan is preliminary and should not be used for construction purposes without the approval of the City and Borough of Yakutat. The user of this plan is advised that this plan is preliminary and should not be used for construction purposes without the approval of the City and Borough of Yakutat.

REV	DATE	DESCRIPTION

DESIGNED BY	DATE	PROJECT NO.	1	OF	1
CHECKED BY	DATE	PROJECT NO.	1	OF	1

Firm Qualifications and Experience

PND has an extensive background in marine facilities including floats, sheet pile and fill docks, floating docks, pile-supported docks, fender and mooring systems, breakwaters, staging areas, transit yards, boat lifts, graving facilities, ferry terminals, cruise ship docks, military docks, lighting, facility planning, utilities and master plans. PND regularly provides design reviews and screening level studies for potential marine related projects. PND has been involved in marine master plans for the Alaska communities of Valdez, Juneau, Unalaska and Kodiak.

The PND team is the best choice for this project because the firm already has a well-developed design; has met with the City and community on several occasions to resolve technical and political issues; understands U.S. Coast Guard and fuel distributor requirements of the project; has surveyed the site; has developed the construction permit documents; has estimated quantities and costs; and has worked with two construction contractors to develop a construction plan.

The Open Cell sheet pile dock is the ideal solution for this project, and PND as its developer is most experienced and knowledgeable about applications of the technology. Used primarily on docks and similar structures, it is a cellular flat sheet pile structure in which each cell's sheet piles are driven in the shape of a U when viewed from above. The system functions as a horizontally tied membrane relying solely on the vertical flat sheet pile anchor wall to restrain a curved flat sheet pile arch face. The bulkhead becomes a series of U-shaped vertical member structures that does not need toe embedment for stability.

The PND Open Cell system was developed in the early 1980s, and addresses many problems and failures observed with other types of bulkhead and erosion-control structures. Many failures are associated with tie-rod wall systems, overloads and corrosion. It is almost impossible to compact soils beneath tie-rods sufficiently to prevent settlement. When settlement occurs due to weak soils, construction methods, seismic events or other factors, tie rods will often fail. Loss of fill through wall cracks has plagued other systems. The Open Cell System addresses soil settlement problems and is unaffected by even severe settlement, seismic action or overload.

Closed cell bulkheads, meanwhile, are large-diameter flat sheet pile assemblies, often 70 feet to 80 feet in diameter. This size is sensitive to large loadings, such as from earthquakes or ship impact; many failures were noted following the 1964 Alaska earthquake. The Open Cell avoids these problems by using small cells, usually 30 feet wide, with resulting low stresses and elimination of small or sensitive components.

In addition, the Open Cell structure is insensitive to toe scour. Its small cell feature produces a failure-arresting concept particularly immune to impacts, explosions, earthquakes and large loads. The proven old closed cellular sheet pile concept has been significantly improved via the modern Open Cell.

The simplicity of the Open Cell system requires relatively few critical steps, which translates into more efficient and lower cost construction. Initially, fill is placed to provide a work pad for bulkhead construction. A shore-based crane places a single-level template at the end cell or near the center of construction. The cell is driven and the template is moved to the next cell. The first tail wall and

Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

interior wall are driven. After several cells are installed in this manner, fill is placed in the cells as work progresses. Depending upon fill and in-situ material properties, vibracompaction can be utilized to compact material above and below water table level.

To date, more than 130 Open Cell structures have been built. Many have successfully sustained vessel impacts and large earthquakes. The Open Cell Bulkhead was named a 1998 recipient of the Construction Innovation Forum, Inc. prestigious NOVA Award, which has been referred to as the "Nobel Prize" for construction. The annual award recognizes revolutionary solutions, processes and products that improve the quality, efficiency and cost-effectiveness of construction.

Ability to Perform Timely Execution of the Project Work

PND Engineers, Inc. is an Alaska corporation originally formed in 1979, incorporated as Peratrovich, Nottingham & Drage in 1982, as of Sept. 16, 2004, renamed PND Inc. and currently undergoing a name change to PND Engineers, Inc., while retaining the same organizational structure. PND's main office is in Anchorage, with Juneau and Seattle branches.

PND currently employs 90 people, including 33 licensed professionals, 14 engineers-in-training and three professional land surveyors. Just more than half of PND's total staff is Anchorage-based, and professional personnel from Juneau and Seattle offices will assist if needed to ensure client requirements and deadlines are met, on time and on budget. PND's staff includes:

<u>Discipline</u>	<u>PND Anchorage</u>		<u>Juneau</u>	<u>Seattle</u>
Administrative	12	8	1	3
CAD Technician	11	6	2	3
Civil Engineers	28	13	4	11
Construction Inspectors	3	1		2
Environmental Scientist	1	1		
Foundation/Geotech'l Engineer	4	2	1	1
Land Surveyor	3	3		
Soils Engineers	2	2		
Structural Engineers	21	9	3	9
Technician/Analyst	2	2		
Value Engineer	2	1		1
Hydrologists	1	1		
Other				
	90	49	11	30

PND personnel are accustomed to handling multiple projects, and have the capacity, capability and diversity to offer comprehensive services even on short notice. PND's diverse workforce and constant workload allow flexibility to reassign individuals during a project due to delays, accelerated schedules, changes in design criteria and other situations.

PND is currently in the process of hiring additional professional staff to meet the requirements of newly awarded, significant design projects. The resulting staff expansion will afford even more flexibility in assigning necessary expertise where it is needed.

PND has compiled and keeps current an extensive library of the latest codes, industry standards and construction product information, as well as aerial photography for use in layouts. The firm updates holdings on a regular basis.

Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

RSA Engineering, Inc. is a consulting firm specializing in mechanical and electrical engineering in Alaska. RSA was founded in June 1983 as a sole proprietorship and was incorporated as a Subchapter "S" Corporation in 1986. RSA's design philosophy is to provide each client with a high standard of engineering while staying within time and budget constraints. RSA Engineering is a shareholder-owned corporation, with 21 of its 33 employees as shareholders. This promotes employee concern for efficient operations as well as customer satisfaction.

RSA's depth of personnel makes qualified people available to quickly respond to this project. RSA can adapt to the project's schedule, whether accelerated or delayed, since each engineer or staff person has a back-up available. The total resources at RSA include:

Mechanical Engineers (P.E.)*	6	Designers	5
Mechanical Engineers (degreed)	6	Drafters	3-
Electrical Engineers (P.E.)*	7	Administrative	4
Electrical Engineers (degreed)	3		

** One engineer is licensed in both mechanical and electrical engineering.*

RSA can assign additional staff members to the project to satisfy accelerated schedules and RSA's staff willingly works overtime to meet project schedules. RSA typically has many projects in different stages of development. Staff members are accustomed to working on several projects at a time since the firm completes over 300 projects a year. Many of our current on-going projects are in construction phase, which requires less time of staff members.

Particularly noteworthy with regard to this project is that the PND and RSA personnel proposed for the Yakutat Multipurpose Dock have recently completed the successful design, bidding and construction of a very similar EDA sheet pile dock project (EDA 07-79-05381), the City of Dillingham (COD) All Tide Dock. This project was completed summer 2005. The project was completed within budget and allowed several alternate items to be included in the project. The design, bidding and construction required coordination and compliance with EDA requirements to ensure project funding re-imbursement, despite several EDA personnel changes. PND has received many compliments on the project team and success of the COD All Tide Dock design, coordination and construction.

Part Three

35 Points

Qualifications and experience on similar projects

The following are representative relevant examples of PND designs.

PND experience

Adak Small Boat Harbor Dock Project (EDA Project No. 07-01-05594)

Phase I Completion: 2005

Client/Owner: City of Adak

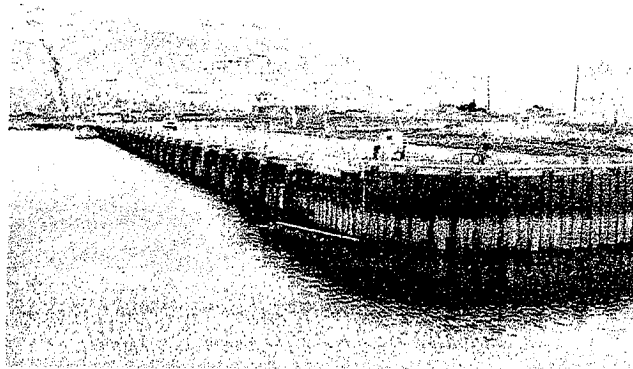
PND performed concept through final design, bidding support and contract development duties as well as permitting for the City of Adak's new small boat harbor/dock project. This project involved renovating and more than doubling the size of the existing harbor basin, including planning for the future addition of a marine travel lift. The first phase consisting of the 600-ft bulkhead dock, 52,000 cu yd of dredging, slope protection for the interior harbor and uplands improvements has recently

been completed, including construction of nearly 300 feet salmon spawning habitat to fulfill project permitting mitigation requirements. Remaining work, an additional 300,000 cu yd of dredging and 23,000 sq ft of floats, is scheduled for the near future. The new dock face was designed to accommodate 60-ft fishing vessels; however it can moor much larger vessels. Contract development and bidding phases required substantial coordination due to EDA funding requirements and funding deadlines which created an aggressive design schedule.

Project Cost: \$6.2 million

Budget and schedule performance: Even with winter construction in the very climatically challenging Aleutian Islands, the project was completed ahead of schedule, under budget, and with no change orders or cost increases.

Reference: Steve Hines, City Manager, (907) 592-4500.



Dillingham Cold Storage Dock (EDA Project No. 07-79-05381)

Completed: 2005

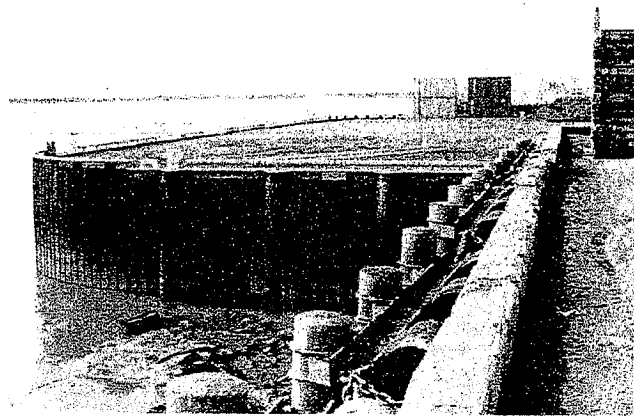
Client/Owner: City of Dillingham

PND provided concept through final design, construction documents and permitting for the demolition and replacement of the Dillingham Cold Storage Dock. Work included researching available information and gathering additional data relating to potential design alternatives for all tide dock; public presentation of design options and recommendation to City Council; completion of preliminary design and cost estimates for construction; preparation of project information package for use in requesting construction funding; preparation and submission of all necessary permits required for the project on behalf of the city; and completion of final plans, specifications and cost estimates. PND provided complete construction drawings, contract documents and construction inspection in accordance with all EDA requirements. The cost-effective Open Cell bulkhead design allowed several alternates to be included in the project.

Project Cost: \$5.7 million

Budget and schedule performance: Under budget, project final completion postponed due to inclement weather, no project claims.

Reference: City Manager John Fulton, Dillingham, 907.842.5211 (phone), 907.842.2060 (fax), planning@nushtel.com



U.S. Coast Guard/City of Unalaska Dock Expansion

Completed: 2002

Client/Owner: City of Unalaska

The U.S. Coast Guard and the City of Unalaska combined to finance a 530 ft dock for utilization by the USCG and the City. The dock consists of a heavy duty 325 ft. Open Cell sheet pile dock and a medium duty 180-ft. pile supported concrete deck panel dock with 2.5± acres of upland fill.

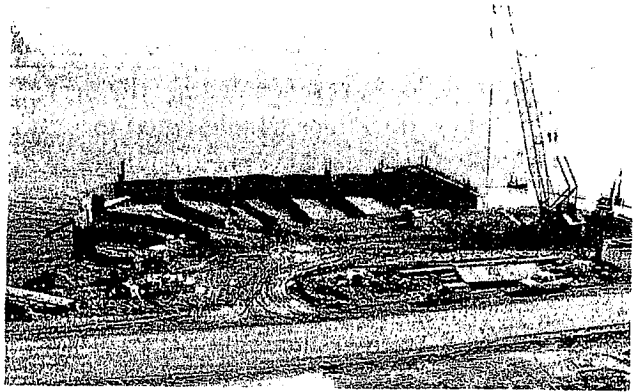
Approximately 75% of the piles had to be rock anchored to meet earthquake requirements. Both dock portions are faced with a heavy duty fendering and mooring system. The dock face provides

water, fuel, electrical, telecommunications and sewerage systems. Upland facilities consist of a combination telephone/electrical/water building and a fuel distribution shack along with a high mast lighting system. PND conducted upland and bathymetric surveys; geotechnical investigation; provided conceptual, preliminary and final design; conducted several public meetings to present preliminary and final design layouts; contract preparation; bid assistance; submittal review; fabrication inspection; construction administration and close-out including as-builts.

Project Cost: \$9.2 million

Budget and schedule performance: This project came in under 0.5% for engineering-design change orders and was constructed in time to accommodate the 1st scheduled USCG vessel despite the original contractor filing bankruptcy mid-way through the project.

Reference: Chris Hladick, City Manager, 907.581.1251.



Chignik Dock Feasibility and Development Plan

Chignik, AK

Client/Owner: City of Chignik

The Chignik Dock Project is a 7.4-acre Open Cell sheet pile fill dock being developed for the City of Chignik. The use of inexpensive spoils from dredging of the Chignik small boat harbor will provide for a very inexpensive and functional facility. The \$8.5 million project will comprise a ferry dock, a ship lift capable of lifting 100-ton boats, and substantial uplands that will include ferry staging, transient container storage and maintenance areas. This project is significant because the City of Chignik is planning to tie together three local villages - Chignik Lakes, the City of Chignik and Chignik Lagoon - by road within the next few years, and Chignik will serve as their regional port.

Estimated Completion: Phased construction through 2006 (estimated)

Project Cost: \$6 million

Budget and schedule performance: This project is ongoing and to date has met both budget and schedule objectives. PND has assisted the City in acquiring funds to construct phase I of this project and is also helping to acquired funding for phase II.

Reference: Chignik Mayor Dick Sharpe, (907) 749-2280/2281, fax 749-2300, home 317-2992, dick@chignik.org; or Jim Brewer, former Chignik mayor, home 749-2232.

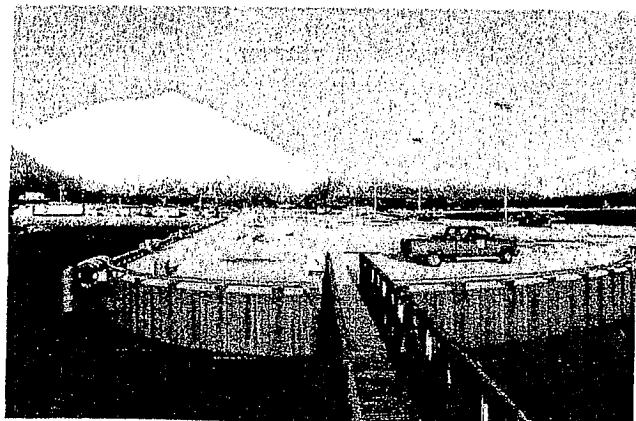
Seward Railroad Dock and Freight Terminal

Completed: 2001

Client/Owner: Alaska Railroad Corporation

This project involved inspection of an existing dock; concept design for extending a passenger dock; design of a new bulkhead freight dock; design of a new freight building, including sewer extension and water supply line; and location of electrical and telephone lines.

The dock incorporates PND's reliable, economical Open Cell technology. The soil-filled structures are founded on a skeleton of interlocked and anchored steel sheet piles that



are driven into the seafloor. Vibracompaction of the base material on the seafloor and subsequent layers of fill stabilize the complete structure.

The dock serves the Alaska Railroad for freight, tour ships and other uses. It was funded in part by cruise lines, which advanced \$1.1 million for upgrades to the Alaska Railroad passenger terminal and dock.

Project Cost: \$6 million

Budget and schedule performance: On time, within budget.

Reference: Roy Thomas, Alaska Railroad Corp., 907.265.2520.

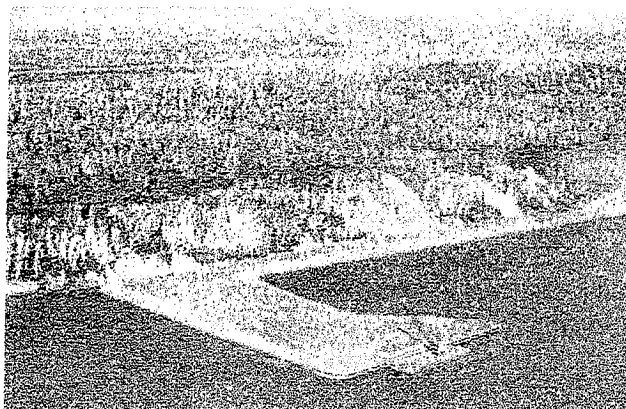
Port MacKenzie Dock

Matanuska-Susitna Borough, Alaska

Completed: 2000

Client/Owner: Matanuska-Susitna Borough

Port MacKenzie is an \$8.25 million project, with \$6.75 million of that amount appropriated by Alaska's Congressional Delegation, and 20 percent matching funds from the State of Alaska and the Matanuska-Susitna Borough. The Federal Highway Administration slated this high-priority project for the design and construction in less than one year.



PND served as the project design engineers and applied award-winning design capabilities to engineer and build a cost-effective gravel and "Open Cell" sheet pile bulkhead dock in a challenging environment. Port MacKenzie proved to be an interesting challenge, as the extreme tidal fluctuations, dense soils and severe ice impacts had to be considered in design. PND was also involved in permitting and as a construction consultant.

Project Cost: \$8.25 million

Budget and schedule performance: The port facility was dedicated on schedule in December 1999.

Final construction cost was \$7.1 million, more than 10% below the engineer's estimate.

Reference: Marc VanDongen, Port director, mvandongen@matsugov.us, phone 907.746.7414; fax 907.745.1248; cell 907.354.7414.

North Star (Anderson) Dock, Port of Anchorage

Completed: 2000

Client/Owner: North Star Stevedoring Co. and ARCO Alaska, Inc.

A dock was needed to allow barge loading of Alaska-built Northstar Island oilfield modules, being transported from Anchorage to the North Slope. To load the modules, a barge would be floated to the dock at high tide, and then allowed to go aground during low tide. While aground, the modules would be driven onto the barge. During high tide, the loaded barge would refloat and begin the journey north. The dock and the ground under the barge had to be strong enough to support the expected loads, and the height of the grounded barge had to match the dock. All work had to be completed to meet the tight schedules dictated by the short period of ice-free sea lanes off the North Slope.



PND evaluated soil strength by drilling test holes on- and offshore. Dock upgrades were designed utilizing Open Cell bulkheads and geotextile technology, and offshore fill and grading plans were completed. Tidal fluctuations and records were analyzed to assure adequate water depth to float the barge. PND also designed the Open Cell dock, assisted with materials purchase and fabrication, and provided construction QA/QC.

Initially, a permanent living quarters, utility module and tanks were transported by sealift barge. Subsequently, two oil process modules totaling in excess of 7,000 tons, and a 3,000-ton compressor module, pumphouse, warehouse and office building module were shipped.

Project Cost: \$1.7 million

Budget and schedule performance: Ahead of schedule by two months; within budget.

Reference: John Conway, VECO, 907.264.9124.

King Cove Deep Water Dock

Completed: 1992

Client/Owner: City of King Cove

Work included design of an 800-foot \pm gravel causeway with riprap, a 140-foot \pm steel open-cell bulkhead dock, two breasting dolphins, two mooring dolphins, and associated catwalks.

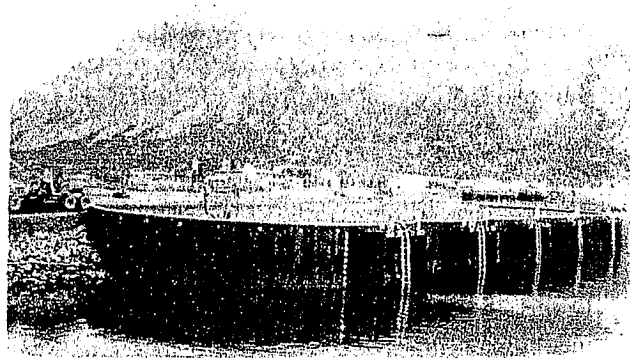
Wave refraction and hindcasting studies were performed as well as bathymetric, topographic, and tideland surveys. Borrow sites for the 40,000 cubic yards of gravel fill and 12,000

cubic yards of riprap were also investigated. Design/build additive alternate contract packages were also developed for fuel and water line services. PND also provided construction engineering and inspection services for this project.

Project Cost: \$2.6 million

Budget and schedule performance: On time, within budget.

Reference: Gary Hennigh, City Manager of King Cove, 907.274.7555, ghennighmgr@gci.net.



RSA experience

RSA has provided design for numerous dock lighting and support facilities, as well as bulk fuel projects throughout Alaska. Relevant projects include:

Selawik Bulk Fuel Upgrades

Owner: AVEC

Estimated Construction Cost: \$200,000

Period of Performance: 2002-2003

Contact: Wiley Wilhelm, LCMF, (907) 273-1830

RSA provided electrical design for a new consolidated bulk fuel tank farm including new lighting and power controls as well as intermediate tanks for the school, water plant, and power plant.

UMC USCG Dock Addition Mechanical/Electrical

Owner: City of Unalaska

Estimated Construction Cost: \$870,000

Period of Performance: 2000-Present

Contact: Scott Seabury, City of Unalaska, (907) 581-1251

RSA provided mechanical and electrical design for 478-foot-long dock, dock and site lighting, dock shore power, telecommunications and cable television runs. Shore-side services include a 920 SF parking lot, power, lighting, telecommunications, heating and plumbing for a 360 SF waiting room/phone room facility.

Kodiak Trident Basin Float Plane Fuel Dispensing System

Owner: Uyak Air Service

Estimated Construction Cost: \$178,000

Period of Performance: 1997-1998

Contact: Butch Tovsen, (907) 486-3407

RSA provided mechanical and electrical design for this project which added a fuel dispensing system on the dock to the existing diked fuel storage tank. The system incorporated an automatic fuel management system, fuel filtering system, double walled fuel containment piping and transition sumps with alarm system, and manual rewind reels.

Nikolski Fuel System Upgrade

Owner: State of Alaska Department of Energy

Estimated Construction Cost: \$65,000

Period of Performance: 1999-2000

Contact: Mary Judd, (907) 269-4691

RSA provided electrical design for an upgrade to the bulk fuel storage facilities and dispensing system. The design was based on the Department of Energy prototype drawings and included the addition of grounding at the bulk tank farm and connections to day tanks at the power plant and school. RSA worked on this project with LCMF, Inc.

Cordova Dock Electrical Lighting Upgrade

Owner: City of Cordova

Estimated Construction Cost: \$162,200

Period of Performance: 1997

Contact: Unknown

RSA provided electrical design for lighting upgrades at this facility. The design included relocation of navigational lights to accommodate new mooring dolphins, addition of two 400 ampere, 480 volt, 3-phase outlets on the dock to supply shore power for a new Coast Guard vessel, and dock lighting.

City of Unalaska Cargo Dock Electrical

Owner: City of Unalaska

Estimated Construction Cost: \$10 million

Period of Performance: 1998-2000

Contact: John Pickering, PND, 907.561.1011

RSA provided electrical design services to provide high mast exterior lighting for a new dock facility in Unalaska.



Westward Seafoods Dock Electrical – Unalaska

Owner: Westward Seafoods

Estimated Construction Cost: \$3 million; electrical, 530,000

Period of Performance: 1997

Contact: Alan Christopherson, PND, 907.561.1011

RSA provided electrical design services for a dock extension. The design included lighting, power, cable television and telephone outlets for connection with ships, and power for lighting and winches on the dolphins and catwalk.

Tanana Bulk Fuel Storage and Dispensing Upgrade

Owner: State of Alaska Department of Energy

Estimated Construction Cost: \$110,000

Period of Performance: 1999-2000

Contact: Mary Judd, (907) 269-4691

RSA provided electrical design for an upgrade to the bulk fuel storage facilities and dispensing system. The design included multiple dispensing stations for the City and Council tanks and controls for the Power Plant Generator day tank.

Nunapitchuk Fuel System Upgrade

Owner: State of Alaska Department of Energy Estimated Construction Cost: \$120,000
Period of Performance: 2000 Contact: Mary Judd, (907) 269-4691
Description: RSA provided electrical design for a new consolidated tank farm at the Water Plant, Power Plant, and Elementary School, and a new Nunapitchuk Corporation tank farm with dispenser building across the river. The design included a main control panel at the consolidated tank farm to manually fill the intermediate tanks utilizing new transfer pumps and high level cut off switches. A separate control panel was installed at the Corporation tank farm to control the transfer and dispenser pumps. RSA worked on this project with LCMF, Inc.

Experience with Federally and EDA-Funded Projects

PND has completed many successful projects utilizing EDA-funded projects, including the Dillingham Dock (completed 2005), Adak Dock (completed 2005), early phase of the Chignik Small Boat Harbor and various projects on St. George Island in the 1980s.

PND has provided design and engineering services for project with other federal funding sources, including those for the USDA Forest Service (roads, docks, bridges), U.S. Coast Guard (docks and uplands), Federal Highway Administration (Tudor Trail Crossing, Port MacKenzie development and Whittier Tunnel conversion); and U.S. Navy (fire/crash training center, piers, dolphins, value engineering).

Proposed Staff, Experience and Qualifications

PRINCIPAL-IN-CHARGE

Alan B. CHRISTOPHERSON, P.E. | PND Treasurer; Senior Engineer VII

Professional Engineer - Alaska, (5786), 1983; Oregon, (14218), 1988; Washington, (25617), 1989; New York, (079647), 2002; New Jersey, (GE45021), 2003; Virginia, (0402 038 144), 2003; Pennsylvania, (062790), 2003; Alabama, (26161), 2004

B.S., Civil Engineering, 1975, University of Washington

M.S., Civil Engineering, 1981 University of Alaska

Mr. Christopherson has nearly 30 years of planning, design and project management experience, and has the proven ability to develop innovative solutions for severe conditions and project constraints. He has designed and managed a number of EDA-funded projects and Open Cell dock projects. He has conducted foundation investigations, and developed pile driving expertise in the arctic, also writing extensively on this subject. Other areas of experience include marine dredging, reburial of offshore pipelines, slope stability analyses, design of drainage systems, development of construction systems for difficult pile driving conditions, construction engineering and management, and computer analysis of design. His Alaska dock project design and management experience encompasses Open Cell structures of varying sizes, many in small and/or remote communities. Specific projects include leading a multidisciplinary team expanding the City of Unalaska's Marine Center Dock complex, providing conceptual design of oil spill response ferry transport docks at the villages of Tatitlek and Chenega, design of Open Cell abutments for the Meltwater Bridges on the North Slope, and leading engineering design for BP Exploration (Alaska), Inc.'s Northstar oil drilling and pumping island Open Cell dock.

PROJECT MANAGER

Dempsey THIEMAN, P.E. | PND Senior Engineer, Marine Designer

Registered Professional Engineer (CE 9974), Alaska, 1999; California, 2003

B.S. Civil Engineering, 1994, California Polytechnic State University at San Luis Obispo

Mr. Thieman has more than 11 years of professional engineering experience and has designed numerous marine facilities and docks. He performed final design modifications and managed the

construction of the City of Dillingham's \$6 million All Tide Dock, a sheet pile bulkhead structure that will greatly improve the City's freight handling capabilities. He completed the design and coordination of EDA funding, and oversaw the bid phase and contract negotiation. Mr. Thieman also recently designed the KFM Stockton Travelift-style sheet pile barge dock; performed concept design, planning and cost estimates for a Travelift economic feasibility study in Cordova, Alaska; and designed the Alaska Marine Lines Barge Dock facility in Cordova, constructed in 2002. He has designed and managed construction of many project on Alaska's North Slope including bridges, low water crossings, docks, and erosion control. He designed and managed the City of Valdez Small Boat Harbor boat launch float replacement, and the Valdez Small Boat Harbor gangway upgrade retrofit project. Mr. Thieman performed the design of the upgraded heavy-duty fendering system and the small boat float expansion for the SERVS dock in Valdez. He has also assisted in the design of several barge mooring facilities in the Prince William Sound area for Alyeska Pipeline Service Co.

LEAD ELECTRICAL ENGINEER

Timothy E. HALL, P.E. | RSA Vice President, Principal Electrical Engineer

Bachelor of Science Electrical Engineering, University of Alaska Fairbanks, 1991

Registered Professional Electrical Engineer, EE-9131, Alaska

Journeyman Electrician License - #117357

Mr. Hall has more than 19 years' experience in electrical construction. He has hands-on experience as an electrician and has worked extensively in the construction field while earning his engineering degree. Mr. Hall has performed electrical engineering for projects including commercial, institutional and industrial buildings or processes. He has both hands-on experience and the educational background to provide well-balanced, informed designs. Representative experience includes:

Cordova Dock Upgrade: Electrical design for lighting upgrades including relocation of navigational lights to accommodate new mooring dolphins, addition of two 400 ampere, 480 volt, 3-phase outlets on the dock to supply shore power for a new Coast Guard vessel, and dock lighting.

City of Unalaska Cargo Dock: Electrical design to provide high mast exterior lighting for a new dock facility in Unalaska.

Homer Small Boat Harbor Improvements: Electrical design and construction administration for repair and renovation of the small boat harbor. The design includes replacing the floats and ramps, addition and renovation of the ramp area, and installation of potable water.

King Cove New Boat Harbor Shore Power: Electrical design services for power and lighting at the new boat harbor. The design included extension of utility distribution to the boat harbor, three-phase shore power for approximately 50 large vessel slips, and lighting for the new floats.

Also: Ketchikan Spruce Mill Building Tank Design, MOA Transit Facility Fuel Tank Replacement, Tuntutuliak Fuel System Upgrade.

ELECTRICAL DESIGNER

Robert P. Herrett | RSA Senior Electrical Designer

Attended University of Washington, Biomedical Engineering (no degree - 3 years)

Attended University of Alaska Anchorage, Arctic Engineering Course, 1991

National Council on Qualifications for the Lighting Professions, 1997, ID # 028433

Mr. Herrett has more than 21 years of experience in the electrical design field. He serves as project manager and lead electrical designer on a wide variety of projects, including many educational, commercial, industrial, medical, and housing facilities. Mr. Herrett has complete engineering responsibility of projects from preliminary concept stage through construction documents, construction administration and project close-out. Representative project experience includes:

City of Unalaska Cargo Dock: Electrical design to provide high mast exterior lighting.

UMC USCG Dock Addition: Mechanical and electrical design for a new dock at least 478 feet long, dock and site lighting, dock shore power, telecommunications and cable television runs to the dock.



Final Design and Construction Documents - Multipurpose Sheet Pile and Fill Dock

Shore-side services include a 920 SF parking lot, power, lighting, telecommunications, heating and plumbing for a 360 SF waiting room/phone room facility.

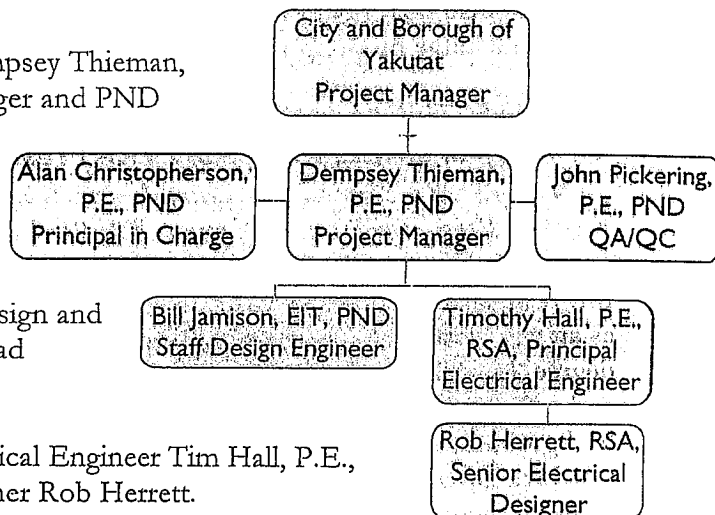
Westward Seafoods Dock: Electrical design for dock extension, to include lighting, power, cable television and telephone outlets for connection with ships, and power for lighting and winches on the dolphins and catwalk.

Unalaska Steward Street Bridge: Electrical design to provide new underground vaults and raceways across the bridge for power and telephone utility use, new pole mounted street lighting, and a new power panel.

Also: Westward Seafoods Fuel Distribution, Zima Highland Fuel Storage Tank

Project team organization

The PND team will be led by Project Manager Dempsey Thieman, P.E., who will answer to the Borough project manager and PND Principal-in-Charge Alan Christopherson, P.E. In turn, Mr. Thieman will oversee design work by PND Staff Engineer Bill Jamison and electrical design by RSA Engineers. Quality assurance and quality control will be provided by John Pickering, P.E. a PND principal with more than 26 years of design and management experience on a variety of dock and road projects statewide.



RSA Engineers' effort will be led by Principal Electrical Engineer Tim Hall, P.E., who will be assisted by RSA Senior Electrical Designer Rob Herrett.

References from clients

References and contact information are included for all of PND's and RSA's project examples, provided earlier in this section. In addition, the following are testimonials from clients and contractors attesting to the Open Cell's practicality, durability and cost-effective technology.

"After six years of heavy use and exposure to Knik Arm waves and ice, the structure is in good shape and functioning without maintenance."

—Jeff Bentz, Northstar Terminal and Stevedore Co., 907.272.7537

"We stand behind Open Cell bulkhead structures and would not hesitate to recommend this type of structure."

— Brad West, West Construction Co., Inc., 907.561.9811

"The Open Cell makes for a much easier construction process and what appears to be a much more versatile and, therefore cost-effective engineered approach."

— Hal Dreyer, Dejon Corp., 907.646.5000

"For deep structures, the Open Cell concept solves many problems with construction, cost and function."

— Cliff Olmstead, Wilder Construction Co., 907.344.2593

"The City of Nome now has three Open Cell bulkheads in its port system. These structures are exposed to the open ocean environment where waves can reach 14 feet and sea ice can be 5 feet thick! After 10 years of such exposure, the Open Cells are performing well."

— Randy Romenesko, City of Nome, 907.443.5242

Name and location of firms providing subcontract services

RSA Engineering of Anchorage, specialists in mechanical and electrical engineering, will provide electrical construction documents and construction administration services with regard to ten separately-metered refrigeration van outlets, lighting and power for a fish cleaning and sorting area, power for boat fueling facilities, dock and site lighting. RSA will three submittals – schematic design, design development and final design – and rough order of magnitude engineer's cost estimates at each submittal. Construction administration services will include answering bidder's questions, preparing addenda as required, electrical submittal reviews, answering contractor's questions during construction and performing two construction site visits.

Part Four

20 Points

Method of Compensation and Proposed Fee

Detail Design through Bid Phase – Fixed Fee

ENGINEERING SERVICES		Professional							Admin.		Cost
		Senior Engineers				Staff Engineers			CAD Des. V	Tech. V	
		VII	III	II	I	V	IV	II			
Hourly rate		\$140	\$100	\$95	\$90	\$85	\$80	\$70	\$80	\$90	
TASK DESCRIPTION		HOURS per TASK by DISCIPLINE									
1	Initial Site Visit and Preparation	2	30				30				\$5,680
2	Design Meetings (bi-weekly)	5	30				40				\$6,900
3	Open Cell Dock Design	10	30				60		20		\$10,800
4	Barge Dolphin Design	2	10				20		7		\$3,440
5	Fuel Float Design	10	20				40		15		\$7,800
6	Marine Crane Mount and Spec	2	4				16		7		\$2,520
7	Seafood Processing Station	10	30				40		15		\$8,800
8	Bulk Fuel Piping System Design	10	20				30		9		\$6,520
9	Access Rd to Project Site	4	30				30		6		\$6,440
10	Gravel Conveyor Specification	1	3				5		2		\$1,000
11	Passenger Loading Ramp	2	6				30		8		\$3,920
12	EDA Coordination	10	30				36			10	\$8,180
13	Electrical Design Coordination		15				20		10		\$3,900
14	Electrical Design (RSA-subcons.))										\$24,970
15	Bidding & Construction Documents	5	20				30			10	\$6,000
16	Bid Support	2	30				40			15	\$7,830
Subtotal		75	308				467		99	35	\$114,700
Expenses											
1	Airfare to Yakutat	2 round-trip tickets @ \$500 each									\$1,000
2	Meals and Lodging	4 days @ \$150 per day									\$600
Subtotal											\$1,600
Total Detail Design through Bid Phase -- Fixed Fee											\$116,300

Construction Inspection and Contract Administration – Time and Materials

Construction Inspection and Contract Administration – Time and Materials											
ENGINEERING SERVICES		Professional						Admin.		Cost	
		Senior Engineers				Staff Engineers		CAD Des. V	Tech. V		
		VII	III	II	I	V	IV				II
hourly rate		\$140	\$100	\$95	\$90	\$85	\$80	\$70.	\$80	\$90.	
TASK DESCRIPTION		HOURS per TASK by DISCIPLINE									
1	Construction Kick-off Meeting	2	16				16			2	\$3,340
2	Construction Support	30	200				720			30	\$84,500
3	Construction Progress Meetings		36							6	\$4,140
4	As-Built Drawings	2	10				40			20	\$6,280
5	RSA Inspection (subconsultant)										\$6,230
6	Project Close-out documentation		16				40				\$4,800
	Subtotal	32	278				800			56	\$109,290
Expenses											
1	Meals per Diem	98 days @\$40 per day									\$3,920
2	Lodging	3.15 months @ \$2,000 per month (est.)									\$6,300
3	Vehicle Rental	45 days @ \$60 per day (est.)									\$2,700
4	Airfare to Yakutat	4 round-trip tickets @ \$500 ea (est.)ch									\$2,000
	Subtotal										\$14,920
Total Construction Inspection and Contract Administration – Time and Materials											\$124,210

1. Assumes 12 weeks on-site construction inspection.

2. If Borough provided lodging, vehicle, etc. can be provided - costs can be reduced accordingly.